

CLAIMS

What is Claimed is:

1. An apparatus providing true geodetic coordinates of a target position using an optical stereo image database comprising:
 - a portable personal computing device (PC) having means to accept input and commands, means to output, a memory means, and means to display a set of optical stereo images, side by side, from said optical stereo image database, comprising a first image and a second image; and,
 - a processor configured to maintain said optical stereo image database comprising at least one set of said stereo images with corresponding geodetic data, and to execute a process corresponding to said input and commands, said process comprising,
 - accepting input of geodetic coordinates of an own position (OP);
 - extracting the set of stereo images centered around said OP from said stereo image database and storing said images in said memory means;
 - displaying said stereo images via said display means and displaying a first marker corresponding to the OP on each of the first and second images;
 - accepting input of target position (TGT) on said first stereo image and displaying a second marker corresponding to the TGT on the first image;

20 autocorrelating and displaying said second marker corresponding to the
21 TGT on said second stereo image;
22 receiving approval of the selection of TGT;
23 computing the true geodetic coordinates and elevation for the TGT
24 including correcting said geodetic data from the optical stereo image
25 database for local magnetic declination variance;
26 outputting the true geodetic coordinates, inclination and range of TGT.

1 2. The apparatus of claim 1 wherein said portable personal computing device comprises a
2 Panasonic Toughbook TM or a Dell Inspiron TM.

1 3. The apparatus of claim 1 wherein said optical stereo image database comprises the
2 Digital Point Positioning Database (DPPDB).

1 4. The apparatus of claim 1 wherein said true geodetic coordinates of said own position
2 (OP) are obtained from said image database, a Global Positioning System (GPS) receiver,
3 an Advanced Targeting Forward Looking Radar (ATFLIR) image, a Low Altitude
4 Navigation and Targeting Infrared for Night (LANTIRN) pod, or the FalconView
5 mapping system.

1 5. The apparatus of claim 1 wherein said geodetic coordinates are in the World Geodetic
2 System 1984 (WGS-84), the Military Grid Reference System (MGRS), or like reference
3 system.

1 6. The process of claim 1 wherein the process utilizes the Reference Point Method (RPM)
2 for correcting said geodetic data from the optical stereo image database for local
3 magnetic declination variance.

1 7. A method for providing true geodetic coordinates of a target position using an optical
2 stereo image database comprising:

3 providing a portable personal computing device (PC) having means to accept input and
4 commands, means to output, a memory means, and means to display a set of optical
5 stereo images, side by side, from said optical stereo image database, comprising a
6 first image and a second image; and,

7 providing a processor configured to maintain a stereo image database comprising optical
8 stereo imagery with corresponding geodetic data, and to execute a process

9 corresponding to said input and commands, said process comprising,

10 accepting input of geodetic coordinates of an own position (OP);

11 extracting the set of stereo images centered around said OP from said stereo image
12 database and storing said images in said memory means;

13 displaying said stereo images via said display means and displaying a first marker

14 corresponding to the OP on each of the first and second images;

15 accepting input of target position (TGT) on said first stereo image and displaying a
16 second marker corresponding to the TGT on the first image;
17 autocorrelating and displaying said second marker corresponding to the TGT on said
18 second stereo image;
19 receiving approval of the selection of TGT;
20 computing the true geodetic coordinates and elevation for the TGT including
21 correcting said geodetic data from the optical stereo image database for local
22 magnetic declination variance;
23 outputting the true geodetic coordinates, inclination and range of TGT.

1 8. The method of claim 7 wherein said portable personal computing device comprises a
2 Panasonic Toughbook TM or a Dell Inspiron TM.

1 9. The method of claim 7 wherein said optical stereo image database comprises the Digital
2 Point Positioning Database (DPPDB).

1 10. The method of claim 7 wherein said true geodetic coordinates of said own position (OP)
2 are obtained from said image database, a Global Positioning System (GPS) receiver, an
3 Advanced Targeting Forward Looking Radar (ATFLIR) image, a Low Altitude
4 Navigation and Targeting Infrared for Night (LANTIRN) pod, or the FalconView
5 mapping system.

1 11. The method of claim 7 wherein said geodetic coordinates are in the World Geodetic
2 System 1984 (WGS-84), the Military Grid Reference System (MGRS), or like reference
3 system.

1 12. The method of claim 7 wherein the process utilizes the Reference Point Method (RPM)
2 for correcting said geodetic data from the optical stereo image database for local
3 magnetic declination variance.

1 13. A computer program product, embodied on a computer readable medium, for providing
2 true geodetic coordinates of a target position using an optical stereo image database
3 comprising:

4 computer code embedded in a portable personal computer (PC) having a computer
5 program code causing said PC to interface with a user and with other electronic
6 medium;

7 computer code for receiving input and commands and for outputting data;

8 computer code for displaying a set stereo images side by side, from said optical stereo
9 image database, comprising a first image and a second image;

10 computer code for configuring a processor to maintain said optical stereo image database
11 comprising at least one set of said stereo images with corresponding geodetic data;
12 and,

13 computer code to execute a process corresponding to said input and commands, said
14 process comprising,

15 accepting input of geodetic coordinates of an own position (OP);
16 extracting the set of stereo images centered around said OP from said stereo image
17 database and storing said images in said memory means;
18 displaying said stereo images via said display means and displaying a first marker
19 corresponding to the OP on each of the first and second images;
20 accepting input of target position (TGT) on said first stereo image and displaying a
21 second marker corresponding to the TGT on the first image;
22 autocorrelating and displaying said second marker corresponding to the TGT on said
23 second stereo image;
24 receiving approval of the selection of TGT;
25 computing the true geodetic coordinates and elevation for the TGT including
26 correcting said geodetic data from the optical stereo image database for local
27 magnetic declination variance;
28 outputting the true geodetic coordinates, inclination and range of TGT.

1 14. The computer program product of claim13 wherein said portable personal computer (PC)
2 comprises a Panasonic Toughbook TM or a Dell Inspiron TM.

1 15. The computer program product of claim13 wherein said optical stereo image database
2 comprises the Digital Point Positioning Database (DPPDB).

1 16. The computer program product of claim13 wherein said true geodetic coordinates of said
2 own position (OP) are obtained from said image database, a Global Positioning System
3 (GPS) receiver, an Advanced Targeting Forward Looking Radar (ATFLIR) image, a Low
4 Altitude Navigation and Targeting Infrared for Night (LANTIRN) pod, or the
5 FalconView mapping system.

1 17. The computer program product of claim13 wherein said geodetic coordinates are in the
2 World Geodetic System 1984 (WGS-84), the Military Grid Reference System (MGRS), or
3 like reference system.

1 18. The computer program product of claim13 wherein the process utilizes the Reference
2 Point Method (RPM) for correcting said geodetic data from the optical stereo image
3 database for local magnetic declination variance.